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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/563,880

06/26/2006

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EXAMINER

KHOSRAVIANI, ARMAN

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/563,880	<b>Applicant(s)</b> NAITO ET AL.	
	<b>Examiner</b> Arman Khosraviani	<b>Art Unit</b> 2818	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 16-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 1/29/2009 have been fully considered but they are not persuasive.
2. Applicant contends the Yoshimura reference states no concern for limiting current flow. Examiner respectfully disagrees. Yoshimura teaches a constant current method (column 4, lines 60-61) to limit the current supplied to effect electrochemical polymerization (col. 2, ll. 63-65). Kamigawa teaches (col. 6, ll. 40-43) a mechanism of limiting current in excess of a predetermined value.
3. Applicant contends the aging treatment of Kamigawa differs from the present invention. The occurrence of an aging treatment in forming the semiconductor layer is outside the scope of the claimed invention. As applied, Kamigawa teaches only a mechanism of limiting current in excess of a predetermined value.

### ***Claim Rejections - 35 USC § 103***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 1-7, 10, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al. (US 20030133256), in view of Yoshimura (US 4,864,472), and in further view of Kamigawa et al. (US 6,139,592).

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Regarding claim 1, Yoshida teaches (figures 8 and 2-7, ¶¶ 37-41) a jig for producing capacitors, which is used for forming a semiconductor layer 3 by means of energization on two or more electric conductors 10 each having formed on the surface thereof a dielectric layer 2, but fails to explicitly show the jig comprising two or more current ejection-type constant current sources, Yoshida teaches a power supply as the source, each having an output electrically connected in series with a connection terminal for the electric conductor 10.

However, Yoshimura teaches (figure 1, column 4, lines 60-61) using a constant current source 5 and forming polymerization layer (organic semiconductor) 14 on the dielectric 13 coated anode 12 (3).

Since both Yoshimura and Yoshida teach the device above, it would have been obvious to have incorporated the above features of Yoshimura in Yoshida because the constant source/diode would limit the current to a predetermine constant value for the deposition process.

The combination of Yoshimura and Yoshida fails to teach two or more current ejection-type constant current sources.

However, Kamigawa teaches (figure 5, column 6, lines 41-43) two or more current ejection-type constant current sources (diodes 50 and 51) each having an output electrically connected in series with a connection terminal for the electric conductor 31/211.

Since Kamigawa in combination with Yoshimura and Yoshida teach the device above, it would have been obvious to have incorporated the above features of

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Kamigawa in the combination of Yoshimura and Yoshida for the benefit reducing leakage current.

Regarding claim 2, Yoshida teaches (figures 8 and 2-7, ¶¶ 37-41) a jig for producing capacitors, which is used for forming a semiconductor layer 3 by means of energization on two or more electric conductors 10 each having formed on the surface thereof a dielectric layer 2, but fails to explicitly show the jig comprising diodes, and two or more current ejection-type constant current sources each having an output electrically connected in series with a connection terminal for the electric conductor 10.

However, Yoshimura teaches (figure 1, column 4, lines 60-61) using a constant current source 5 and forming polymerization layer (organic semiconductor) 14 on the dielectric 13 coated anode 12 (3).

Since both Yoshimura and Yoshida teach the device above, it would have been obvious to have incorporated the above features of Yoshimura in Yoshida because the constant source/diode would limit the current to a predetermine constant value for the deposition process.

The combination of Yoshimura and Yoshida fails to teach two or more current ejection-type constant current sources.

However, Kamigawa teaches (figure 5, column 6, lines 41-43) the jig comprises diodes 50, 51 each having a cathode connected with each connection terminal of the electric conductors and each having an anode electrically connected to each other, and two or more current ejection-type constant current sources (diodes 50 and 51) each

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having an output electrically connected with a connection terminal for the electric conductor 31/211.

Since Kamigawa in combination with Yoshimura and Yoshida teach the device above, it would have been obvious to have incorporated the above features of Kamigawa in the combination of Yoshimura and Yoshida for the benefit reducing leakage current.

Regarding claim 3, Kamigawa teaches (figure 5, column 6, lines 41-43) the current ejection-type constant current sources are constituted by two or more current regulating diodes 50, 51 with respective anodes being electrically connected and each cathode serving as an output.

Regarding claim 4, Kamigawa teaches (figure 5, column 6, lines 41-43) the connection terminal for the electric conductor 31/211 and the output of the current ejection-type constant current source 50, 51 are electrically connected through a cable.

Regarding claim 5, Kamigawa teaches (figure 5, column 6, lines 41-43) the jig comprises a terminal to which respective anodes of the current regulating diodes 50, 51 are electrically connected.

Regarding claim 6, Kamigawa teaches (figure 5, column 6, lines 41-43) the jig further comprises diodes (another set of diodes 50, 51) with each cathode being connected to the connection terminal of each electric conductor 31/211 and comprises a terminal to which respective anodes of the diodes are electrically connected.

Regarding claim 7, Kamigawa teaches (figure 5, column 6, lines 41-43) the connection terminal for the electric conductor has a socket structure 212.

Regarding claim 10, Kamigawa teaches (figure 5, column 6, lines 41-43) the connection terminal for the electric conductor has a comb shape.

Regarding claims 17 and 18, Kamigawa teaches (figure 5, column 6, lines 41-43) individual ones of the current ejection-type constant current sources (set of diodes 50, 51) pass a predetermined constant current through respective ones of the electric conductors 31/211 to which they are electrically connected.

6. Claims 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al. (US 20030133256), in view of Yoshimura (US 4,864,472), and in further view of Kamigawa et al. (US 6,139,592).

Regarding claim 16, since the combination of Kamigawa, Yoshimura and Yoshida teach the device above, it would have been obvious to have used the device in a method for forming a capacitor, as it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex Parte Masham*, 2 USPQ F.2d 1647 (1987).

7. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al. (US 20030133256), in view of Yoshimura (US 4,864,472), and in further view of Kamigawa et al. (US 6,139,592) and Fawcett et al. (US 4,192,721).

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Regarding claims 8 and 9, the combination of Yoshida, Yoshimura, and Kamigawa fails to teach the connection terminal for the electric conductor is a metal sheet or a foil-like metal material.

However, Fawcett teaches (figure as described by column 9, lines 4-7; a metal cathode electrode) the connection terminal for the electric conductor is a metal sheet, or a foil-like metal material.

Since Fawcett in combination with Kamigawa, Yoshimura, and Yoshida teach the device above, it would have been obvious to have incorporated the above features of Fawcett in the combination of Kamigawa, Yoshimura, and Yoshida for the benefit improving device performance.

While not objectionable, the Office reminds Applicant that "product by process" limitations in claims drawn to structure are directed to the product, per se, no matter how actually made. *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also, *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessmann*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wethheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al.*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or otherwise. Note that applicant has the burden of proof in such cases, as the above case law makes



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clear. Thus, no patentable weight will be given to those process steps which do not add structural limitations to the final product. See MPEP 2113.

The language of "foil-like metal material formed by means of printing" is considered a method of forming the device of claim 1 and not limitations of the final product. Therefore, such limitations are given no patentable weight. formed by means of printing.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arman Khosraviani whose telephone number is 571-272-6402. The examiner can normally be reached Monday-Friday, 8am - 5pm (Eastern Time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Loke can be reached on 571-272-1657. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Arman Khosraviani/

Examiner, Art Unit 2818

6/29/2009

/STEVEN LOKE/

Supervisory Patent Examiner, Art Unit 2818